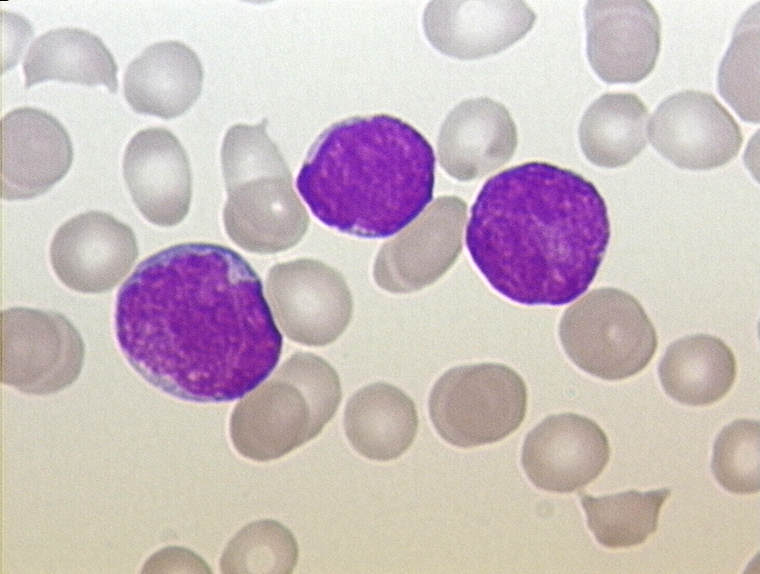
Acute lymphocytic leukemia

**What is Acute lymphocytic leukemia?**

Acute lymphocytic leukemia (ALL) is a fast-growing cancer in which the body produces a large number of immature white blood cells (lymphocytes). These cells are found in the blood, bone marrow, lymph nodes, spleen, and other organs.

**Signs and symptoms**

* Bleeding from the gums
* Fever
* Frequent infections
* Frequent or severe nosebleeds
* Lumps caused by swollen lymph nodes in and around the neck, underarm, stomach or groin
* Pale skin
* Shortness of breath
* Weakness, fatigue or a general decrease in energy

**How is the disease diagnosed?**

Tests and procedures used to diagnose acute lymphocytic leukemia include:

***Blood tests:*** A blood test may reveal too many white blood cells, not enough red blood cells and not enough platelets.

***Bone marrow test:*** During bone marrow aspiration, a needle is used to remove a sample of bone marrow from the hipbone to look for leukemia cells. Doctors in the lab will classify blood cells into specific types based on their size, shape and other features. They also look for certain changes in the cancer cells and determine whether the leukemia cells began from the B lymphocytes or T lymphocytes. This information helps your doctor develop a treatment plan.

***Imaging tests:*** Imaging tests such as a chest X-ray and computerized tomography (CT) scan may help determine whether cancer has spread to the brain and spinal cord or other parts of the body.

***Spinal fluid test:*** A lumbar puncture test, also called a spinal tap, may be used to collect a sample of spinal fluid. The sample is tested to see whether cancer cells have spread to the spinal fluid.

**Treatment (s)**

In general, treatment for acute lymphocytic leukemia falls into separate phases:

1. ***Induction therapy:*** The purpose of the first phase of treatment is to kill most of the leukemia cells in the blood and bone marrow.
2. ***Consolidation therapy:*** Also called post-remission therapy, this phase of treatment is aimed at destroying the leukemia cells remaining in the brain or spinal cord.
3. ***Maintenance therapy:*** The third phase of treatment prevents leukemia cells from re-growing. The treatments used in this stage are often given at much lower doses.
4. ***Preventive treatment to the spinal cord:*** People with acute lymphocytic leukemia may also receive treatment to kill leukemia cells located in the central nervous system during each phase of therapy. In this type of treatment, chemotherapy drugs are injected directly into the fluid that covers the spinal cord. This kills cancer cells that can't be reached by chemotherapy drugs given by mouth or through an intravenous line.

Depending on your situation, the phases of treatment for acute lymphocytic leukemia can span 2 1/2 to 3 1/2 years.

Treatments may include:

* ***Chemotherapy.*** Chemotherapy, which uses drugs to kill cancer cells, is typically used as an induction therapy for children and adults with acute lymphocytic leukemia. Chemotherapy drugs can also be used in the consolidation and maintenance phases.
* ***Targeted drug therapy.*** Targeted drugs attack specific abnormalities present in cancer cells that help them grow and thrive.
* ***Radiation therapy.*** Radiation therapy uses high-powered beams, such as X-rays, to kill cancer cells. If the cancer cells have spread to the central nervous system, your doctor may recommend radiation therapy.
* ***Stem cell transplant.*** A stem cell transplant may be used as consolidation therapy in people at high risk of relapse or for treating relapse when it occurs. This procedure allows someone with leukemia to re-establish healthy stem cells by replacing leukemic bone marrow with leukemia-free marrow.
* ***Clinical trials.*** Clinical trials are experiments to test new cancer treatments and new ways of using existing treatments. While clinical trials give you or your child a chance to try the latest cancer treatment, treatment benefits are still being evaluated.

**Prevention**

No methods are known to prevent Acute lymphocytic leukemia.